

Soils, Crops and Fertilizers

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Inquiries of Progressive Farmer readers cheerfully answered.

Making Corn.

Editors Progressive Farmer:

Southern farmers made a better corn crop than usual last year, but if they do not look out they will find their corn crib next fall, in the West, and the money made on cotton going away to other States to pay for the necessities of life.

One of the most successful farmers we ever met attributes his good fortune largely to the fact that while his tenants made cotton, he devoted his attention on his wages farm to the growing something with which to feed them and their animals. He made corn, wheat, oats, potatoes and meat which he sold them on credit, and at the end of the year he owned nearly all the cotton these people had worked all the summer to make and gather. He grew some cotton also, to be sure, but he grew it as a surplus crop and in a regular rotation. Now, if they do not mind, a great many of our farmers will find themselves next fall in the condition of this gentleman's tenants; some one else will own the cotton, or what amounts to the same thing, some one else will get most of the money the cotton brings, in exchange for corn, meat, flour, hay, etc. There is a tendency right now to plant all the best land in cotton and stick the corn in anywhere around the edges.

Now, friends, this will not do! The price of corn is advancing as well as the price of cotton. It is already worth seventy cents per bushel in Atlanta, and is going higher. We must lay our plans to make what corn we will need for home consumption at least, then we shall be able to keep some of our cotton money when we get it. We should, therefore, divide up our land and make a good corn crop as well as cotton crop.

All through the upper part of Georgia and adjoining States the practice is to plant corn on the river and creek bottoms year after year, and with little or no fertilizer. Where the land is overflowed periodically by creek or river, the fertility of the land is fairly well maintained and even increased. But there is a very large amount of bottom land that does not become overflowed, and on such land the yield of corn is becoming lighter year by year. It still grows a fairly good stalk, but the ears are nothing like so heavy as formerly.

This falling off is undoubtedly due to the exhaustion of the mineral elements of plant food in the soil, phosphoric acid and potash. There is still a fair amount of organic or vegetable matter in most of these soils which the growth of grass and weeds, after the crop is laid by, helps to keep up. The growth of stalk also indicates that there is at least a fair supply of ammonia. The ear, however, is deficient, and ears are what we want.

When we realize that a crop of fifty bushels of corn per acre actually removes from an acre of land sixty-seven pounds of nitrogen, thirty-one pounds of phosphoric acid and eighty pounds of potash, we can better understand why, if the supply of plant food is not renewed, the ears will grow smaller from year to year. If our yield per acre is only twenty-five bushels, the drain upon the soil will be half the above amount, and to meet this and increase our yield of corn from year to year, we should use on such land at least six hundred pounds per acre of a fertilizer analyzing nitrogen $2\frac{1}{2}$ per cent, phosphoric acid 7 per cent, and potash 8 per cent. To make this fertilizer, take cottonseed meal six hundred and eighty pounds, acid phosphate one thousand pounds, and muriate of potash three hundred and twenty pounds to make a ton. Mix thoroughly together until the whole mass is of an even color,

pounding up all lumps as they roll down around the edges of the pile. By using six hundred pounds of such a fertilizer per acre on your bottom lands, together with proper tillage and the planting of cowpeas in the middles, when laying by, you will be able to grow corn steadily on this land and find your crops constantly increasing in size every year, instead of diminishing. Very little nitrogen will be needed in the fertilizer, as this will be supplied by the pea-vines dying on the land.

Now, don't fall into the mistake of concluding the fertilizer is going to make the corn by itself, or that it will make up for poor tillage; on the contrary, the fact that you have spent money for fertilizer is another reason why you should take extra pains in the preparation of your land, and the after cultivation of the crop. I know nothing which will go further toward making a fine corn crop than the thorough preparation of the seed-bed. A great many people recommend fall plowing, but we have always made better corn to break the land thoroughly in the spring, when it was in the right condition, put in our fertilizer, stir it well into the soil, and plant our seed in the freshly prepared land. We always break all the land before we plant. You cannot expect to make corn by simply running a furrow, putting in seed and fertilizer, and break-can you expect to make corn if you neglect its can you expect to make corn if you neglect its cultivation after it is up.

Corn, to make well, must grow right off from the start, and keep growing; and good cultivation, especially when very young, will do more to help it along than anything else after it is up. We make it a point to keep the crust broken with harrow, weeder, or cultivator, and continue the cultivation until corn is in roasting ear. We made fifty-eight bushels of corn per acre on upland the past year, and we worked it at least six times. The last two workings were given with fine-toothed cultivator run very shallow, not more than an inch deep and having dust-board on behind. Corn must have moisture when it is making ears, and if we can preserve the moisture by a little extra late tillage to break the crust, after a rain, it pays well to do it. Very shallow cultivation at this time will never hurt corn, as it does not go deep enough to injure the roots. Our corn never had a fired blade on it until after the corn was made and the fodder began to burn up.

Battle Hill, Ga.

The Tenant Problem and the Cotton Crop.

Editors Progressive Farmer:

I want to commend as thoughtful and timely the article in your issue of January 19th, taken from the Roanoke-Chowan Times, headed, "Better Houses for Tenants," and add just a thought, to-wit, that each land-owner, in addition thereto, provide each good tenant (have none other) with a good milk cow of some good breed or grade free of charge, save for her feed and care. See results. The tenant would receive daily at home for his feed and care at least one gallon of milk worth twenty-five cents and for a total of 365 days the nice sum of \$91.25. The landlord would receive for his outlay (of say \$25.00) all this feed manufactured into manure, worth \$10.00, and his cow and calf in return, worth \$30, a total of \$40, or a net profit of \$15, besides the gratitude of the poor man and his family. Beats cotton, I should say, even at the high price of fifteen cents.

This fifteen cent cotton reminds me of some things I have been reading about increased acreage of the next cotton crop. Now while I don't claim to be closely related to Solomon, yet it doth appear to me that there will be an increase notwithstanding the warnings of majors, colonels and even those who sit idly waiting about the streets and stores and offices to impart wisdom and free advice to the poor farmer. A slump in the price will be the most powerful argument in the case. C. W. Burkett has written the most sensible article I have read on the subject. I take it, however, there are enough sturdy, thoughtful farmers to hold the country together who will first consider their own personal interests, reasoning upon the entire acreage to be planted with an eye single to the very important crops of corn, peas (both for grain and hay), sweet potatoes, soja beans, chufas, etc., etc.,—and not forgetting the garden by any means.

H. C. D.
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Making the Garden Pay.

Editors Progressive Farmer:

In regard to cultivating a garden profitably we will say we want our garden patch turned early with a turn plow; not too deep, but very coarse. This will have a tendency to destroy worms and insects. Being broken coarse, there will be a continual crumbling or refining process going on all the time during cold weather and the soil will not become packed by the heavy rains.

Time for planting varies with different localities. Uplands should have a heavy dressing of barnyard manure which has been finely chopped. It may then be broken close and deep with a bull-tongue plow to the depth of fifteen inches; then harrow and reharrow until it looks like a seed-bed all over. Never stir the garden if it be the least bit too wet, for you will do more harm than good. It will take your garden years to get over working it when wet.

We now have our soil and manure all in good shape and ready for laying off rows. A very liberal amount of commercial fertilizer may be used in a drill, being scattered in the furrow and followed with a small plow to mix with soil, or scattered in furrow and on both sides of furrow; either way will do. But it must be of a quick acting nature for early maturing crops. If new or bought seed are to be used, we will look at the directions on packages, and sow as near with directions as we think best.

A few rows of early garden peas, such as Wood's Lightning Excelsior or Alaska; also a few rows of Adams' early corn to meet the demand for early roasting ears, which are relished by all. Do not plant too sparingly. Plant a few rows about twice each week, commencing early, and if the first is killed only a few days later, there will be another stand, hence a sure crop.

Seed some Irish potatoes and onions among your first planting. Would suggest for Irish potatoes a fertilizer rich in potash. Lay off rows two or three feet wide; scatter fertilizer as just suggested. Lap two furrows over the first; then reopen furrow, drop potatoes ten or twelve inches apart with one or two eyes. Most of us like to have a few onions for early use, which we make a part of the garden.

There is much difference of opinion as to the best way to raise the onions. They are very productive on a rich soil not too muddy.

Early cabbage, such as the Early York or Jersey Wakefield, make the surest crop, as late ones are liable to sun scald and decay. It is claimed by some that there is not any danger in plowing the cabbage too deep nor getting your land too rich. It is the king of garden plants in this part of North Carolina. The need of the cabbage is nitrogen and phosphoric acid. Distance should be governed by size of cabbage. A simple and cheap way for early plants may be had by constructing a box twelve or eighteen inches wide, three or four feet long, four inches deep, fitting same with rich earth. Seed may then be sown and watered at times and kept in sunshine when not too cold. A slight freeze will not hurt them. When there is any danger of the matured heads being winter killed, the stalks may be turned down where they stand. Cover head with pine bark or straw; then lay three or four inches of dirt on straw and leave unmolested until it is to be carried to the dinner pot. We also like to put some snap beans in the garden for early use, and to have close to the house in case of a hurried meal. Distance for the bean, too, must be governed by the variety. Rows may be about three feet apart, some dropped thicker and some thinner, with a heavy dose of fertilizer, ranging from two to four hundred pounds per acre. Some times the beetle or bugs will sap the life out of the bean if some preventative is not used, finely powdered tobacco dust being the simplest and cheapest we know of.

The foregoing are the most important crops for the garden in our estimation and should be cultivated very often; if dry weather sets in, the oftener the better, but not deep. Of course the women folks must have a few rows of beets and radishes. As my letter is getting too long, I will only name a few things the women folks want in the garden—cauliflower, lettuce, tomatoes and egg plant. We would say right here that tomato soup is one of the most nourishing dishes we every saw. Rhubarb should its place in the garden. If protected from cold weather by two or three inches of manure in winter, it will be ready for turning into pie before anything else we can get in the garden.

C. C. L.
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